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subject to refund are producing revenue in excess of that required for utility operations, it is necessary for us to establish the rate of interest to be paid on the amount of excess revenue to be refunded.

We believe a reasonable guide to the interest rate to be paid on refunds is the cost charged by commercial banks on 24-month personal loans, as set forth in the Federal Reserve Statistical Release G.19 because it is readily ascertainable and takes into account the cost to the consumer of paying excessive rates during the pendency of the rate investigation and because it represents a generally applicable rate, free from individualized consideration such as credit worthiness of the consumer, the kind and amount of security supporting the loan, or the nature of the lender. As required by H.F. 312, we will add a 2 percent per annum interest rate over the cost charged by commercial banks on 24-month personal loans. Therefore, we will require that refunds be paid at an interest rate based on 24-month bank loans to individuals as set forth in Federal Reserve Statistical Release G.19, of which we take official notice, plus 2 percent.

#### FINDINGS OF FACT

Based upon our review of the entire record in this proceeding, we hereby summarize our findings of fact:

1. As the parties have agreed, the appropriate test period for this proceeding is calendar year 1982.
2. Company's proposal to adjust rate base to reflect placement in service of Louisa Generating Station should be adopted. There is

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adopted and Company's net operating income, for purposes of this proceeding, is \$51,157,000.

30. A 13-month average capital structure for the 1982 test period agreed to by OCA and Company should be used in this proceeding to determine capital costs.

31. Company's cost of embedded debt is 8.923 percent.

32. Company's cost of preferred stock is 7.912 percent.

33. The Standard Discounted Cash Flow (DCF) model most accurately predicts Company's cost of common equity.

34. Company's cost of common equity as shown by the record is 14.74 percent. An upward adjustment for the cost of selling stock, market pressure on stock price, and for normal market variation to the cost of common equity proposed by Company should not be made based on the record in this proceeding.

35. Company should be able to attract common equity if allowed an overall rate of return of 11.165 percent.

36. Ratepayers derive some benefit when a utility plans for generating capacity reserves in excess of the 15 percent minimum reserve established by MAPP. OCA's proposed 15 percent reserve margin is unreasonable and should not be adopted.

37. Electric generating capacity exceeding 125 percent of Company's actual peak load is not necessary to meet demands and maintain a reasonable reserve and is, therefore, excessive.

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Reserve Statistical Release G.19 plus 2 percent per annum, computed under the applicable interest rate for each month the over-collection was retained, compounded annually.

#### CONCLUSIONS OF LAW

1. The Commission has jurisdiction of the parties and subject matter of this proceeding.

2. Pursuant to Treas. Reg. § 1.167(1)(1)(h)(1)(iii), the amount of deferred federal income tax liability is the excess (computed without regard to credits) of the actual tax liability calculated using the accelerated depreciation deduction and all other deductions, including state income taxes, over what that tax liability would have been using subsections (1) depreciation deduction and all other deductions, including state income taxes.

3. Section 50 of H.F. 312 requires the application of the excess capacity adjustment provided for in Section 36 of H.F. 312 to this rate proceeding.

#### IT IS THEREFORE ORDERED:

1. The tariffs filed by Iowa Power and Light Company and made subject to investigation in or made a part of this formal proceeding are hereby declared unjust, unreasonable, and unlawful.

2. On or before the expiration of forty-five (45) days from the date of this order, Iowa Power and Light Company shall file revised tariffs setting schedules of electric rates as required by the findings of this order.

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3. Rates based on test period usage contained in the revised tariffs designed to produce a revenue requirement of \$294,186,000 for Company shall be considered the lawful rates chargeable by Company since the date of the rates, which are the subject of this proceeding, were placed in effect subject to refund. However, the lawful revenue requirement shall be adjusted to reflect the rate base reduction related to remaining undepreciated investment, if any, in DPS Units 4 and 5.

4. On or before the expiration of forty-five (45) days from the date of this order Company shall submit for our consideration and approval a plan by which refunds shall be made to customers, in accordance with the findings contained herein, together with sales tax and interest on excess collections, calculated in accordance with finding of fact No. 43. If no refunds are required as a result of the findings contained in this order, Company shall file a statement indicating no refunds are necessary and submit supporting data for its conclusion.

5. Company shall notify the Commission immediately if and when either of the contingencies by which Company would be able to recover its Guthrie County project liabilities have been met. Company shall file new tariffs reflecting the elimination of the recovery of Guthrie County amortization costs and refund money previously collected from ratepayers to pay for those costs.

6. On or before the expiration of three months from the date of this order, Company shall file a report stating the amount of undepreciated investment associated with DPS Units 4 and 5. The report shall be

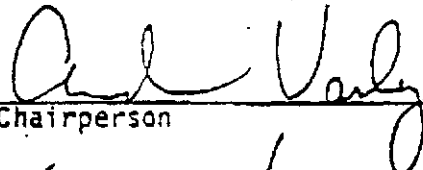
Docket No. RPU-83-24

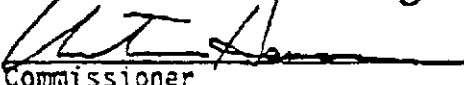
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accompanied by a study in support of Company's conclusion. Company's tariffs shall reflect the appropriate adjustment to rate base and any necessary corresponding adjustments related to the undepreciated investment, if any, in DPS Units 4 and 5.


7. Motions and objections not previously granted or sustained are denied or overruled. Any argument in the initial briefs or reply briefs not addressed specifically herein is rejected either as not supported by the evidence or as not being of sufficient persuasiveness to warrant comments.


IOWA STATE COMMERCE COMMISSION

  
Chairperson

  
Commissioner

ATTEST:

  
Executive Secretary, Assistant to

  
Commissioner

Dated at Des Moines, Iowa, this 6th day of April, 1984.



TERRY E. BRANSTAD, GOVERNOR

IOWA STATE UTILITIES BOARD  
DEPARTMENT OF COMMERCE

## IOWA POWER AND LIGHT COMPANY

JUL 22 1988

Docket No. RPU-83-24

## "ORDER MODIFYING FINAL DECISION AND ORDER ON REMAND"

Issued July 22, 1988

Parties Served:

Sheila K. Tipton  
Bradshaw, Fowler, Proctor & Fairgrave  
1100 Des Moines Building  
Des Moines, IA 50307

Roger D. Colton  
National Consumer Law Center  
11 Beacon Street, Suite 821  
Boston, MA 02108

Joyce J. Green  
Legal Aid Society of Polk County  
808 5th Avenue  
Des Moines, IA 50309

James R. Maret  
Consumer Advocate  
Department of Justice  
Consumer Advocate Division  
Lucas State Office Building  
Des Moines, IA 50319

## CERTIFICATE OF SERVICE

The undersigned hereby certifies that  
the foregoing document has been served  
this day upon all parties of record in this  
proceeding by mailing, by first class mail,  
to each such party a copy thereof, in  
properly addressed envelope with charges  
prepaid.

Date: 07-22-88

*Walter Lada*

IN RE: )  
 )  
IOWA POWER AND LIGHT COMPANY ) DOCKET NO. RPU-83-24

(Issued July 22, 1988)

The District Court issued a final decision in the consolidated cases on September 10, 1986, remanding three issues to the Board for additional proceedings. The court stated:

1. Concerning Iowa Power Issue No. 1, Excess Capacity Issue 1C relating to the inclusion of Cooper purchased energy is determined herein in favor of the Commission with the exception that these proceedings are hereby remanded to the Commission for recomputation of the excess capacity penalty consistent with this Court's ruling beginning on page 21 hereof. The computation per

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Page 2

Attachment 5 of the Commission Order is to be corrected by increasing the "capacity of Company-owned production facilities with LGS by 380 MW."

2. Concerning Iowa Power Issue No. 2, Iowa Power has prevailed on the Interest Synchronization 2A and the Louisa Generating Station AFUDC adjustment for the year ending October 13, 1984, should be deleted. These proceedings are hereby remanded to the Commission for recalculation of the interest synchronization adjustment after any amount of AFUDC relative to the Louisa Generating Station for the year ending October 13, 1984, is first deleted.

3. Concerning Iowa Power Issue No. 3, Iowa Power has prevailed on the Deferred Tax Issue (3) and these proceedings are hereby remanded to the Commission for recomputation with application of a deferred tax rate of 46 percent.

The Board and the Consumer Advocate appealed to the Iowa Supreme Court which affirmed the District Court on all issues on February 17, 1988. See Office of Consumer Advocate v. Iowa State Commerce Commission, 419 N.W.2d 373 (Iowa 1988). The procedendo of the Supreme Court was issued on March 14, 1988.

Pursuant to the remand, the Board now has jurisdiction over these proceedings. The Board will modify the decision and order of April 6, 1984, to conform with the decision the Supreme Court, as follows:

1. COMPUTATION OF EXCESS CAPACITY

The Supreme Court held:

We agree with the district court and with Iowa Power that if the Cooper capacity is included in calculating Iowa Power's total generating capacity, and thus also its excess capacity, it must also be included when calculating average investment. The purpose of the "return adjustment" figure is to disallow any return on that portion of Iowa Power's capacity deemed excessive. Once generating capacity is thus determined, its



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In a directly related adjustment, finding of fact number 9 on page 55 is modified to provide: "The adjustment to rate base for deferred income taxes proposed by Consumer Advocate should be rejected." The second sentence of the Board's discussion of the rate base adjustment related to deferred income taxes found at page 14 will be modified to read: For the reasons set forth in the Net Operating Income Section of this order, we reject the OCA proposal.

#### 4. REFUNDS

On February 20, 1987, following the district court's decision on judicial review, Iowa Power filed TF-87-51 to reduce its revenue requirement to a level consistent with the decision of the district court. On April 10, 1987 the Board approved the refund plan identified as Docket No. RFU-87-9. Iowa Power recalculated each bill issued from October 14, 1983 through March 25, 1987, and made refunds to customers. The Supreme Court affirmed the district court in its entirety and therefore no further refunds are due.

#### IT IS THEREFORE ORDERED:

1. The decision and order issued in Docket No. RPU-83-24 on April 6, 1984, is modified as provided above to conform with the decision of the Iowa Supreme Court issued on February 17, 1988, on judicial review.
2. The attachments to the final decision and order are modified to reflect the decision of the Iowa Supreme Court and are attached to and incorporated by reference.

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Page 7

3. All refunds in this docket have been made and no additional  
refunds are necessary.

UTILITIES BOARD

James J. Nagel

[Signature]

ATTEST:

Raymond H. Vantuz  
Executive Secretary

Nancy Shumanek Boyd

Dated at Des Moines, Iowa, this 22nd day of July, 1988.

Iowa Power & Light Company  
RPU-83-24  
Capitalization and Cost Rates

Attachment 4  
Revised 7/22/88

Line No.	Description	Ratio	Rate	Weighted Cost
1	Long-Term Debt	49.085%	8.923%	4.380%
2	Preferred Equity	11.317%	7.912%	0.895%
3	Common Equity	39.958%	14.740%	5.890%
4	TOTAL			<u>11.165%</u> =====

Iowa Power & Light Company  
RPU-83-24  
Excess Capacity

Attachment 5  
Revised 7/22/88

Line No	Amount
1 Investment in Co-owned Production Facilities with LGS (\$000)	443,108
2 Capacity of Company-owned Production Facilities with LGS	1,709 MW
3 Investment per MW for Company-owned Production Facilities	259,279
4 Weighted Return on Equity	5.837%
5 Excess Capacity	181 MW
6 Return Adjustment	2,739,279
7 Tax Effect @ 1.04625	2,865,971
8 Adjustment	5,605,250

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## PUBLIC UTILITIES REPORTS — 92 PUR4th

the Department a schedule of rates designed in accordance with this Decision, as detailed in Section IV., *supra*.

2. The Company shall request a reopening of this docket no later than March 1, 1989.

3. No later than 30 days after making its request for reopening, the Company shall file the following with the Department:

a) Financial Statements through December 31, 1988;

b) Year end sales and customer data by rate class as of December 31, 1988, and

c) A cost of service study based on data no older than September 30, 1988, or such later date as may be available.

4. The Company will meet with Department staff within sixty days of the date of this Decision to develop an appropriate format for reporting revenue calculations and bill comparisons for future rate case filings.

5. The Company shall modify its weather normalization methodology as described in Section IV, *supra*.

6. The President and Chairman shall keep a record of his time spent on activities associated with Bozrah Light and Power Company as indicated in Section IV., D.7, *supra*.

7. The Company shall provide the Department with five copies of each issue of "High-Lines" within seven days of publication.

8. The Company shall meet with the Department staff within 60 days of the date of this Decision to discuss outstanding cost of service study issues and to develop an appropriate format for reporting revenue calculations for future rate case filings.

9. The Company shall file with the Department no later than June 30, 1988, the information on The Gilman Brothers' Co. hydroelectric facility as detailed in Section IV., G.1, *supra*.

10. The Company shall report to the Department by June 1, 1988, the possibility

of ConnSave implementing a low cost/no cost program for Bozrah.

11. The Company shall report to the Department regarding the results of its investigation of the feasibility of offering commercial/industrial energy audits and efficient motor rebates. Such report shall be filed no later than three months from the date of issuance of this Decision.

12. The Company shall file an analysis of potential alternative rates with the Department when it makes its request to reopen this docket.

13. The Company shall include information on conservation programs with its bills on a quarterly basis.

We hereby direct that notice of the foregoing be given by the Executive Secretary of this Department by forwarding true and correct copies of this document to parties in interest, and due return make.

## Re Iowa Power and Light Company

Docket No. RPU-87-2

Iowa Utilities Board  
April 25, 1988

APPLICATION for authority to increase rates for retail electric distribution service; granted, as modified, upon review of various items of cost of service, rate base, and rate of return.

1. RATES, § 120.1 — Test year — Electric utility.

[IOWA] In an electric rate case, the board accepted a calendar 1986 test year, adjusted for known and measurable changes occurring within 12 months of June 25, 1987, the date of filing of the rate application.  
p. 303.

2. RETURN, § 26.4 — Common equity capital — Discounted cash-flow model — Elements.

[IOWA] The discounted cash-flow (DCF) model was accepted for use in an electric rate case to

year 1986 adjusted for known and measurable changes occurring within twelve months of June 25, 1987, the filing date of Consumer Advocate's petition.

### III. RATE OF RETURN

Consumer Advocate and Iowa Power disagree on what constitutes a fair overall rate of return on rate base. Consumer Advocate claimed the evidence supports 9.25 percent while Iowa Power argued 10.976 percent is a fair rate of return. This return is the weighted average cost of capital derived from: the capital structure, the cost of common equity, the cost of senior securities (i.e., long-term debt), and the cost of preferred equity. The Board has determined the appropriate capital structure in this case consists of 50.017 percent common equity, 46.769 percent long-term debt, and 3.214 percent preferred equity. The associated costs are: common equity, 10.963 percent; long-term debt, 7.845 percent; and preferred equity, 4.239 percent. Each of these costs are then weighted according to the capital structure. The weighted costs, rounded to the nearest thousandth of a percent, are 5.483 percent, 3.669 percent, and .136 percent, respectively. The sum of the weighted costs is the overall rate of return. The Board has determined, based on evidence in this case, that a fair overall rate of return is 9.289 percent.

#### A. Cost of Common Equity.

The Board's determination of the fair rate of return on common equity is a question of fact which requires a consideration of all the facts and circumstances. The fair return must also comport with the just and reasonable standard enunciated in IOWA CODE §476.8 (1987). In *Iowa-Illinois Gas & E. Co. v. Iowa State Commerce Commission*, 347 N.W.2d 423, 428 (Iowa 1984), the Iowa Supreme Court discussed application of the just and reasonable standard as it relates to the rate of return determination:

In mandating a fair return on a utility's investment, substantive due process does not require a regulatory agency to adopt a particular rate. For the courts to interfere on due process grounds, the return allowed by the agency must be outside a zone of reasonableness. This gives the agency an area of freedom within which "to devise methods of regulation capable of equitably reconciling diverse and conflicting interests." *Re Area Rate Proceeding for Permian Basin*, 390 U.S. 747, 767, 75 PUR3d 257, 273, 20 L.Ed.2d 312, 336, 88 S.Ct. 1344, 1360 (1968).

"Whether a particular return is reasonable "depends upon many circumstances and must be determined by the exercise of a fair and enlightened judgment, having regard to all relevant facts.... The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." *Bluefield Waterworks & Improv. Co. v. West Virginia Pub. Service Commission*, 262 U.S. 679, 692, 693, PUR1923D 11, 20, 21, 67 L.Ed. 1176, 1182, 1183, 43 S.Ct. 675, 679 (1923) (emphasis supplied). Moreover, the fixing of rates requires "a balancing of the investor and the consumer interests," even if balancing should result in no net revenues for the utility. *Federal Power Commission v. Hope Nat. Gas Co.*, 320 U.S. 591, 603, 51 PUR NS 193, 38 L.Ed. 333, 345, 64 S.Ct. 281, 288 (1944). "Regulation may, consistently with the Constitution, limit stringently the return recovered on investment, for investors' interests provide only one of the variables in the constitutional calculus of reasonableness." *Re Area Rate Proceeding for Permian Basin*, 390 U.S. at 769, 75 PUR3d at 274, 20 L.Ed.2d at 337, 88 S.Ct. at 1361 (1968). (Emphasis in the original.)

The Board has consistently based its rate

of return determination on economic models designed to approximate actual expectations. Both parties agreed the discounted flow (DCF) model is appropriate to determine the proper return. The Board has used the DCF model in most cases and concurs with the choice.

The parties agreed Iowa Resources, the parent of Iowa Power, should act as proxy for Iowa Power. Because Iowa Power's common stock is owned by Iowa Resources, no market data for Iowa Power exists. (Tr. 133-34, 651-52) Therefore, the cost of Iowa Resources

Cost of common equity

Dr. Rasmussen, the witness for Consumer Advocate, computed the cost of common equity to be between 9.831 and 10.625 percent using this standard DCF for Iowa Resources. Dr. Rasmussen determined 10.625 percent to be the appropriate cost of common equity. (Tr. 147.)

Iowa Power's witness, Mr. Hargrave, concluded the return on common equity was in a range of 14.2 to 14.6 percent at the time of the DCF analysis. (Tr. 648, 658.) Mr. Hargrave explained the basis for determining the rate of return:

The rate of return is determined by the marketplace by investors. It is a function of the supply and demand of funds, the riskiness of the investment, the return available on alternative investments, the riskiness of the investment, and the return which they may invest. They are forced to buy stock in or lend

Return on common equity

(Tr. 649.) Iowa Power argued that the use of a corporation of market-to-book ratio

## PUBLIC UTILITIES REPORTS — 92 PUR4th

of return determination on economic models designed to approximate an investor's expectations. Both parties agreed the discounted flow (DCF) model is appropriate to determine the proper return. The Board has used the DCF model in most rate cases and concurs with the choice.

The parties agreed Iowa Resources, Inc., the parent of Iowa Power, should be used as proxy for Iowa Power. Because all of Iowa Power's common stock is owned by Iowa Resources, no market data on Iowa Power exists. (Tr. 133-34, 651-52.) Therefore, the cost of Iowa Resources common

equity is the cost of Iowa Power's common equity.

## 1. DCF Model.

[2, 3] The standard DCF model is used to predict what returns an investor may reasonably expect from an investment under actual stock market conditions. The model establishes the cost of common equity by measuring the normal dividend yield (dividends per share divided by market price per share) and adding an investor-expected growth rate. (Tr. 134-37.) The model is expressed as follows:

$$\text{Cost of common equity} = \frac{\text{dividends per share}}{\text{market price per share}} + \text{growth rate}$$

Dr. Rasmussen, the witness for Consumer Advocate, computed the cost of common equity to be between 9.331 and 10.631 percent using this standard DCF formula. Dr. Rasmussen determined 10.625 percent to be the appropriate cost of common equity. (Tr. 147.)

Iowa Power's witness, Mr. Hamlin, concluded the return on common equity at a range of 14.2 to 14.6 percent also using a DCF analysis. (Tr. 648, 658.) Mr. Hamlin explained the basis for determination of rate of return:

The rate of return is determined in the marketplace by investors. It reflects the supply and demand of funds, the returns available on alternative investments and the riskiness of the investment. Investors have the entire economic spectrum in which they may invest. They cannot be forced to buy stock in or lend money to

a particular company. Investors evaluate investment risks and expected returns on various investments and then choose the company that best meets their investment objectives. An investor will only purchase a given security if the expected return on that investment is at least equal to the return required to compensate for the risk involved.

(Tr. 632.)

Dr. Rasmussen expressed the same conclusion and further stated, "the price-based DCF cost of common equity lets investors speak for themselves." (Tr. 139.)

While both witnesses used the DCF model, Mr. Hamlin employed a significant variation in his calculations. He proposed an adjustment by multiplying the dividend yield by the market-to-book ratio in the following manner:

$$\text{Return on common equity} = \frac{\text{dividend}}{\text{market price}} \times \frac{\text{market price}}{\text{book value}} + \text{growth}$$

(Tr. 649.) Iowa Power argued that the incorporation of market-to-book ratio into the

formula is necessary to earn an adequate overall rate of return.



## PUBLIC UTILITIES REPORTS — 92 PUR4th

## PUBLIC UTI

The Board will reject Iowa Power's proposed adjustment to the standard DCF formula. The practical effect of Iowa Power's proposal is the elimination of market price from the computation. (Tr. 1064.) Using the Iowa Power method, the return on equity given the dividend and growth rates used by Iowa Power would always be 14.19 percent, regardless of whether the market price is 1¢, \$23.661 (as used by Mr. Hamlin), or \$1,000. (Tr. 1065.) The return on equity is to be premised on investor expectations. Iowa Power's witness acknowledged the return is to be determined in the marketplace. (Tr. 632.) An investor's expectations are based on market price, not book value. The Board will not adopt a formula to determine return on common equity that removes market price from consideration. The Iowa Power premise is faulty, and the Board will use the standard DCF formula.

After the elimination of the Iowa Power variance in the DCF model, the calculations of the two parties are very near agreement on the result the DCF model should produce: 10.625 percent, Consumer Advocate; 10.69 percent, Iowa Power. (Tr. 147-48, 1060, 652-53; Ex. 15, Sch. D; Ex. 122, Sch. 9; Ex. 123, Sch. 1.)

The remaining portion of this section of the order will discuss the individual elements of the DCF model.

## 2. Dividend Level.

Consumer Advocate proposed the Board use a dividend of \$1.64 (Tr. 140) in computing the return while Iowa Power proposed \$1.67. (Tr. 654-55.) Consumer Advocate's proposed dividend was based on the declared dividends for the first two quarters of 1987 as reported by the July 24, 1987, edition of *Value Line* (declared dividend of 41 cents per quarter). (Tr. 140.) The *Value Line* indicated an annual dividend of \$1.64. (Tr. 140.) Iowa Power's proposed dividend was an estimate of the expected dividend reported in the April 24, 1987, *Value Line*. (Tr. 1059.) Iowa Power,

relying on outdated reports, made no showing that the total dividend for the year would exceed \$1.64, with two quarters already declared. It is reasonable to believe that with two quarters of reported dividends totalling 82 cents, the year-end dividend will be \$1.64. The Board will accept Consumer Advocate's dividend.

## 3. Market Price.

Consumer Advocate recommended use of \$24.7316 as a representative market price for Iowa Resources stock using test-year (1986) data. Consumer Advocate witness Rasmussen testified that he "exponentially smoothed" the test-year data in reaching his weighted average price. (Tr. 141.) This "exponential smoothing" technique weighted the last six months of the test year more heavily than the first six months of the test year. (Tr. 141-42. There appears to be no reason to "exponentially smooth" the market price data other than to inflate the market price with the higher year-end numbers, thus depressing the return on common equity.

Iowa Power proposed a market price of \$23.661, an average of the monthly highs and lows of Iowa Resources' stock based on the twelve months immediately prior to filing of this proceeding ending July 1987. (Tr. 161-66.) The Board concurs with Iowa Power's approach but will use a market price of \$22.365, the average of the monthly highs and lows based on the most recent six months of market prices available of record, February 1987 through July 1987. The DCF method is intended to determine a prospective return on investment. It is therefore appropriate to use the most recent verifiable information available rather than relying on historical test-year data. Consumer Advocate witness Rasmussen acknowledged that if out-of-test period information were used, the most recent six-month data would provide the best basis for decision. (Tr. 167-168.) The most recent

consecutive six-month data available is February 1987 through July 1987.

## 4. Growth Factor.

Consumer Advocate advanced a growth factor range of 3.2 percent to 3.6 percent. (Tr. 147.) Iowa Power argued that the growth factor is 3.63 percent. (Tr. 654.) Advocate gave the Board wide latitude in its range. By contrast, Iowa Power insisted on its growth factor with specificity. Iowa Power witness Hamlin used actual growth rates of earnings per share and dividends per share for the five years, and for the same period computed an average "internal growth rate" by multiplying the earned return on common equity times the percentage of earnings retained in the business. (Tr. 654.) Hamlin used *Value Line's* five-year growth rates for earnings and for dividends. (Tr. 653-54.) The average of the growth measures is 3.63 percent. The Board can ascertain the basis of Iowa Power's growth factor and finds it persuasive. The Board will use the growth factor advanced by Iowa Power.

## 5. Verification of the Return.

Iowa Power also performed a DCF analysis on comparable companies to confirm its return. The analysis used a "ratemaking return" of 15.36 percent. (Tr. 655-57; Ex. 122, Sch. 11.) Consumer Advocate attacked the analysis by arguing that the companies chosen for comparison did not meet the comparability criteria. The Iowa Power witness claimed the analysis was flawed because the cost figures were flawed because of the modified DCF formula being used. (Tr. 1059.) Furthermore, the Board agrees with Consumer Advocate and finds that the comparable risk analysis does not justify the proposed return computed by Iowa Power.

Iowa Power further performed

## PUBLIC UTILITIES REPORTS -- 92 PUR4th

ports, made no show-  
 up for the year  
 quarters al-  
 le to believe  
 of reported dividends  
 year-end dividend will  
 will accept Consumer

consecutive six-month data available in this  
 case is February 1987 through July 1987.

#### 4. Growth Factor.

Consumer Advocate advanced a growth factor range of 3.2 percent to 4 percent. (Tr. 147.) Iowa Power argued the growth factor is 3.63 percent. (Tr. 654.) Consumer Advocate gave the Board wide latitude with its range. By contrast, Iowa Power measured its growth factor with specificity. To measure growth, Iowa Power witness Hamlin used actual growth rates of earnings per share and dividends per share for the past five years, and for the same period also computed an average "internal growth rate" by multiplying the earned return on common equity times the percentage of earnings retained in the business. (Tr. 653.) To represent future growth measures, Mr. Hamlin used *Value Line's* five-year forecasted growth rates for earnings and for dividends. (Tr. 653-54.) The average of these three growth measures is 3.63 percent. The Board can ascertain the basis of Iowa Power's growth factor and finds it persuasive. The Board will use the growth factor proposed by Iowa Power.

#### 5. Verification of the Return.

Iowa Power also performed its modified DCF analysis on comparable companies to confirm its return. The analysis resulted in a "ratemaking return" of 15.36 percent. (Tr. 655-57; Ex. 122, Sch. 11.) Consumer Advocate attacked the analysis by demonstrating that the companies chosen as comparable did not meet the comparability criteria the Iowa Power witness claimed to have used. (Tr. 1059.) Furthermore, the resulting cost figures were flawed because of use of the modified DCF formula in determining return. The Board agrees with Consumer Advocate and finds the proffered comparable risk analysis does not substantiate the proposed return computed by Iowa Power.

Iowa Power further performed a risk pre-

mium analysis which yielded a return of 14.61 percent to verify its proposed yield. (Tr. 657-58.) The risk premium analysis utilized a study comparing the Standard & Poor's 500 composite stock with the holding period return on Salomon Brothers High-Grade Corporate Bond Index. However, the record established that the comparison was flawed since this Board has not been shown that utilities are as risky as the Standard & Poor's 500. Additionally, the bond index chosen was not for utility bonds. (Tr. 1068-69; Ex. 14, Sch. E.)

#### 6. Determination of Cost of Common Equity.

[4] Using the standard DCF model, the Board finds the cost of common equity will be set at 10.963 percent, which is within the range of reasonableness of capital costs based upon the record of this proceeding. The cost of common equity will be computed as follows:

$$10.963\% = \frac{\$ 1.64}{\$22.365} + 3.63\%$$

#### B. Cost of Senior Securities.

Consumer Advocate witness Habr computed the cost of debt to be 8.221 percent and the cost of preferred stock to be 4.239 percent. (Tr. 174-76, 1082-83; Ex. 15, Sch. D.) Dr. Habr used the traditional method of calculating the embedded costs of long-term debt and preferred stock. The traditional method recovers an equal amount of discount, premium, and expense each year.

Iowa Power calculated debt cost to be 7.984 percent and preferred stock cost to be 4.350 percent using the "yield-to-maturity" method. (Tr. 672-73; Ex. 123, Sch. 1.) The yield-to-maturity method recovers discount, premium, and expense in an increasing amount each year. The Board has consistently used the traditional method because all of the information needed to calculate properly the embedded cost of debt

DOCKET NOS. RPU-78-27,  
RPU-78-30,  
and RPU-80-36

## STATE OF IOWA

## IOWA STATE COMMERCE COMMISSION

IN RE:

IOWA POWER AND LIGHT COMPANY

DOCKET NOS. RPU-78-27,  
 RPU-78-30,  
 AND RPU-80-36

## DECISION AND ORDER

(Issued July 31, 1981)

## APPEARANCES:

CURTIS L. RITLAND and PAMELA L. PRAIRIE, Iowa Power and Light Company, 666 Grand Avenue, P.O. Box 657, Des Moines, Iowa 50303, appearing on behalf of Iowa Power and Light Company.

LEO J. STEFFEN, JR., GARY D. STEWART and DAVID R. CONN, Office of the Commerce Counsel, Lucas State Office Building, Des Moines, Iowa 50319, appearing on behalf of the Staff of the Iowa State Commerce Commission.

WILLIAM F. SUEPPEL, Meardon, Sueppel, Downer and Hayes, 122 South Linn Street, Iowa City, Iowa 52240, appearing on behalf of the League of Iowa Municipalities.

R. MICHAEL HAYES, City Solicitor, City Hall, East First and Locust Streets, Des Moines, Iowa 50307, appearing on behalf of the City of Des Moines.

ROBERT L. BRAY, Assistant Polk County Attorney, Polk County Office Building, Room 372, Des Moines, Iowa 50309, appearing on behalf of Polk County.

TERRENCE L. TIMMINS, City Attorney, City Hall, 209 Pearl Street, Council Bluffs, Iowa 51501, appearing on behalf of the City of Council Bluffs.

WILLIAM F. RAISCH, Assistant Attorney General, Division of Antitrust Enforcement, Hoover State Office Building, Des Moines, Iowa 50319; and

JOHN A. PABST, Pabst and Pabst, Albia, Iowa 52531, appearing on behalf of the State of Iowa.

JACK KEGEL, South Central Regional Office, Legal Services Corporation of Iowa, 315 East Fifth Street, Suite 25, Des Moines, Iowa 50309, appearing on behalf of Goldia C. Edwards.

SKIP LAITNER, Iowa Citizen/Labor Energy Coalition, Inc., 2514-1/2 Lincolnway, Ames, Iowa 50010, appearing on behalf of the Iowa Citizen/Labor Energy Coalition, Inc.

DON CARLSON, Citizens For Community Improvement, 1521 Sixth Avenue, Des Moines, Iowa 50314, appearing on behalf of Citizens For Community Improvement.

TOM BIXBY, Iowa ACORN, 617 East Grand, Des Moines, Iowa 50309, appearing on behalf of Iowa ACORN.

## **I. PROCEDURAL HISTORY**

On June 30, 1978, Iowa Power and Light Company filed with the Iowa State Commerce Commission a revised electric tariff identified as TF-78-257 proposing a general increase in electric rates of approximately 19.2 percent or \$27.1 million annually. On August 1, 1978, Iowa Power filed a revised gas tariff identified as TF-78-294 proposing a general increase in gas rates of approximately 5.3 percent or \$3.2 million annually.

By orders of July 28 and August 1, 1978, we suspended the proposed electric and gas rate increases, respectively; instituted formal proceedings; and consolidated the proceedings under Docket Nos. RPU-78-27 and RPU-78-30.

Iowa Power subsequently filed additional tariff revisions not constituting general rate increases and certain of such filings have been consolidated with this proceeding by various orders.

On August 1, 1980, Iowa Power filed a revised electric tariff identified as TF-80-312 proposing a general increase in electric rates of approximately 28.7 percent or \$52.1 million annually, and a revised gas tariff identified as TF-80-313 proposing a general increase in gas rates of approximately 9 percent or \$7.8 million annually. By order of August 1, 1980, we suspended the proposed rate increases and instituted a formal proceeding in Docket No. RPU-80-36. By

order of August 28, 1980, we consolidated Docket Nos. RPU-78-27, RPU-78-30 and RPU-80-36.

On December 1, 1978, Iowa Power placed into effect, subject to refund, approximately 80 percent of its proposed electric rate increase in Docket No. RPU-78-27, and approximately 40 percent of its proposed gas rate increase in Docket No. RPU-78-30. On September 1, 1979, Iowa Power placed into effect, subject to refund, the full amount of the electric rate increase in Docket No. RPU-78-27. On December 1, 1979, Iowa Power placed into effect, subject to refund, the full amount of the proposed gas rate increase in Docket No. RPU-78-30.

On December 19, 1980, Iowa Power filed a revised gas tariff identified as TF-80-504 and a revised electric tariff identified as TF-80-505. These revised tariffs were filed as interim rates in Docket No. RPU-80-36 to be collected subject to refund, and represent approximately 60 percent of the gas rate increase and 46 percent of the electric rate increase, respectively, proposed in Docket No. RPU-80-36. Effective with meter readings on and after January 1, 1981, Iowa Power placed into effect, subject to refund, the revised gas and electric rates prescribed in TF-80-504 and TF-80-505, respectively.

On May 26, 1981, Iowa Power filed a revised tariff identified as TF-81-209. This revised tariff was filed as interim rates in Docket No. RPU-80-36 to be collected subject to refund, and represents approximately 71 percent of the electric rate increase proposed in Docket No. RPU-80-36. Effective with bills for meter readings on June 1, 1981, Iowa Power placed into effect, subject to refund, the revised gas and electric rates prescribed in TF-81-209.

In accordance with applicable rules and various orders of the Commission, the following are parties to this proceeding in addition to Iowa Power and the Staff of the Commission:

League of Iowa Municipalities,  
City of Des Moines,  
Polk County,  
Iowa ACORN,  
Iowa Citizen/Labor Energy Coalition (Iowa C/LEC),  
Citizens for Community Improvement (CCI),  
State of Iowa, and  
Goldia Edwards.

Pursuant to order and notice hearings to receive public testimony were held in Council Bluffs, Iowa, on November 17, 1980, and in Des Moines, Iowa, on November 19, 1980. Hearings to receive the evidence of the parties were held in Des Moines, Iowa, in December, 1980; and March and May, 1981. The case was submitted for decision upon the filing of Iowa Power's Reply Brief on July 13, 1981.

By order of December 24, 1980, we approved the first of three stipulations filed in this case by Iowa Power and Staff. The first Stipulation prescribes the accounting treatment for Iowa Power's share of certain capital expenditures made by the Nebraska Public Power District for the Cooper Nuclear Station. Pursuant to the Stipulation, accounting and ratemaking treatment is accorded such costs analogous to that which would be required if Iowa Power owned

Cooper; i.e., capitalization and amortization. The costs involved are expenditures for the construction and extraordinary repair of certain long-life property of Cooper to the extent such costs are not otherwise financed by NPPD from the Renewals and Replacements Account in the Reserve and Contingency Fund established by NPPD's Bond Resolution, or by NPPD in any other manner. The Stipulation did not resolve the proper ratemaking treatment of such costs, if any, in this case.

By bench ruling during the March 1981 hearings, we approved the second Stipulation which had been filed by Iowa Power and Staff on February 26, 1981. That Stipulation prescribed the fair rate of return for 1979, 1980 and beginning January 1, 1981; and revised depreciation rates for electric and gas plant to be effective upon our final decision in this case. Iowa Power and Staff agreed that for purposes of this case, Iowa Power's cost of equity and fair rate of return for the respective periods are as follows:

<u>Period</u>	<u>Cost of Equity</u>	<u>Rate of Return</u>
1979	13.5%	9.74%
1980	13.9	10.08
after 1980	14.2	10.23

The stipulated depreciation rates by plant account are shown in an exhibit attached to and made a part of the Stipulation, and will not be repeated here. The Stipulation reserved for our decision the effect, if any, upon Iowa Power's revenue requirements to be determined in this case.

On July 20, 1981, Iowa Power and Staff filed a third Stipulation. The third Stipulation provides that electric rates for the period commencing June 1, 1981, would be determined on the basis of a 1980 test period with certain specified adjustments to the test period operating results, rather than upon the record heretofore made in this case. The most significant adjustments would